

What is claimed is:

1. A fastener device comprising:
an articulated compression member capable of being reconfigured by compression from a first configuration to a second configuration; and
a tensioning member operably connected with the compression member for selectively applying compressive force to the compression member.
2. The fastener of claim 1, wherein the compression member includes at least two interconnected links.
3. The fastener of claim 1, wherein the compression member includes at least one compression feature, and the compression feature includes at least one from the group comprising: a notch, a corrugated section, a weakened section of said compression member, an angled surface, a protrusion, a pin, or combinations thereof.
4. The fastener of claim 1, further including a displacement detection device positioned to detect a change in configuration of at least a portion of the compression element.
5. The fastener of claim 1, wherein the compression member further includes a functional surface element, at least a portion of which is positioned to contact a target when the compression member is in the second configuration.

6. The fastener of claim 5 wherein the functional surface element includes one element from the group comprising: a cutting element, a heating element, a heat sealing element or combinations thereof.

7. The fastener of claim 5 wherein the functional surface element includes at least one from the group of: adhesives, tackifiers flexible materials, elastic, soft, shock absorptive materials and combinations thereof.

8. The fastener of claim 1 wherein the compression member is selectively adjustable to deform into a plurality of shapes.

9. The fastener of claim 1, wherein the compression member comprises a plurality of interconnected sections, and one end of the tensioning member may be adjustably attached to any section of the compression member

10. The fastener of claim 1 wherein the compression member is comprises a plurality of interconnected sections and further includes a distal end and a proximal end, and wherein the end of the tensioning member for selectively applying compressive force is attached to the compression member at a point spaced from the distal and proximal ends.

11. The fastener of claim 1 wherein the tensioning member comprises a temperature sensitive element that reconfigures and applies compression to the compression member in response to a change in temperature.

12. The fastener of claim 1 wherein the tensioning member comprises a variable volume element that applies tension by varying the volume of said element.

13. The fastener of claim 1, wherein the inner tensioning member further comprises a piercing tip.

14. The fastener of claim 1 further comprising a retention apparatus that releasably secures the fastener in the second configuration.

15. The fastener of claim 1 further comprising a retention apparatus that permanently secures the fastener in a position under tension.

16. The fastener of claim 1 further comprising at least one frangible container that ruptures upon reconfiguration of the compression member.

17. The fastener of claim 16 wherein the at least one frangible container includes a material from the group comprising: chemicals, stimuli sensitive polymers, nuclear materials, biologically active ingredients, antibiotics, anti-inflammatories, hormones, cells, DNA, medicaments, pharmaceutical active ingredients and combinations thereof.

18. The fastener of claim 1 comprising a plurality of compression members each having tensioning members connected thereto, at least one of the compression members in a nested relationship with another of the compression members.

19. The fastener of claim 1 further comprising at least one flexible delivery tube connected to the fastener, the tube adapted for delivery of a fluid through a non-linear path defined by the fastener in a deformed configuration.

20. The fastener of claim 1 further comprising a piezo electric device attached to said tensioning member, said piezo electric device operable to increase or decrease the tension on the tensioning member.

21. The fastener of claim 1 in said second configuration, wherein in said second configuration said fastener includes at least one loop of a generally helical shape.

22. The fastener of claim 21 further including an implantable device adapted to affect the health of a human or animal.

23. The fastener of claim 21 wherein said second configuration is variable between a first and second radius, where the first radius is larger than the second radius.

24. The fastener of claim 23 wherein the tensioning member extends elastically between said first and second radii.

25. The fastener of claim 21 wherein in said first configuration said compression element is substantially straight.

26. The fastener of claim 21 wherein the fastener is a medical device adapted to contact human or animal tissue.

27. The fastener of claim 26 wherein the medical device is a device chosen from the group comprising: a snare, a stomach belt, a surgical clamp, an external aneurysm support, a muscle support, a valve or combinations thereof.

28. The fastener of claim 26 including functional surfaces comprised of biocompatible materials on at least those portions of the tensioning member and compression member exposed to a target comprised of human or animal tissue.

29. The fastener of claim 21 wherein the fastener is a medical device adapted for attachment to the internal surfaces of human or animal tissue.

30. The fastener of claim 29 wherein the medical device is a device chosen from the group comprising: a stent, an occlusive device, an expansion device, a stent, a muscle support, a valve or combinations thereof.

31. A method for fastening, comprising the steps of:
providing a first portion of material to which a fastener is to be fastened;

positioning at least a portion of a fastener in fastening relationship with the first portion of material, the fastener comprising a compression member capable of reconfiguration from a first configuration to a second fastening configuration by compression; and a tensioning member operably connected with the compression member for selectively applying compressive force to the compression member,;

initiating reconfiguration of the fastener from the first position by applying tension to the tensioning member;

compressing the compression member with the tensioning member and substantially reconfiguring the fastener to the second configuration wherein said fastener is in a fastening relationship with the first portion of material.

32. The method of claim 31 wherein the step of substantially reconfiguring the fastener to the second configuration comprises reconfiguring the fastener into substantially one or more loops having a generally helical shape.

33. The method of claim 31 wherein the step of substantially reconfiguring the fastener to the second configuration comprises reconfiguring the fastener into a loop including a portion having a substantially helical shape, wherein the helical shape includes one or more loops.

34. The method of claim 32 wherein said step of reconfiguring the fastener to a second configuration further includes establishing a fastening relationship surrounding a part of the first portion of material with the one or more loops.

35. The method of claim 34 wherein the first portion of material is a generally hollow structure, and wherein the step of establishing a fastening relationship with the first portion of material further comprises clamping said part of the first portion of material with the fastener to at least partially close the hollow structure.

36. The method of claim 35 wherein the one or more loops in the second configuration of the fastener are variable between a first and second radius, the first radius is larger than the second radius, and the step of clamping comprises extending the tensioning member elastically between said first and second radii.

37. The method of claim 35 wherein the first portion of material comprises a biological flow path for a human fluid, and said step of clamping comprises occluding the flow path.

38. The method of claim 34 wherein the fastener in its first position includes a medical device attached thereto, and wherein the step of establishing a fastening relationship further includes attaching a medical device to said first portion of material.

39. The method of claim 31 wherein the first portion of material is a generally hollow structure, and the step of positioning at least a portion of a fastener in fastening relationship with a first portion of material comprises inserting the fastener in a generally linear first configuration inside the generally hollow structure, and the step of substantially reconfiguring the fastener to the second configuration comprises reconfiguring the fastener into substantially one or more loops having a generally helical shape, wherein at least a portion of the loops engage the inside surfaces of the generally hollow structure to fasten to the first portion of material.

40. The method of claim 39 wherein the step of reconfiguring the fastener to the second configuration and engaging the inside surfaces of the generally hollow structure further includes exposing the inside surface of the structure.

41. The method of claim 39 wherein the step of reconfiguring the fastener to the second configuration and engaging the inside surfaces of the generally hollow structure further includes expanding the inside surface of the structure and opening an occlusion.

42. The method of claim 39 wherein the one or more loops in the second configuration of the fastener are variable between a first and second radius, the first radius is larger than the second radius, and the method further includes the step of reconfiguring the fastener between the first and second radii and at least a partially occluding the generally hollow structure.

43. The method of claim 31 wherein said second configuration comprises a generally curved end, and said fastening relationship comprises extending said generally curved end into an opening in said first portion of material.

44. A method for fastening, comprising the steps of:

providing a first and second portion of material to be fastened;

positioning at least a portion of a fastener in fastening relationship with the first portion of material, the fastener comprising a compression member capable of reconfiguration from a first configuration to a second fastening configuration by compression; and a tensioning member operably connected with the compression member for selectively applying compressive force to the compression member,;

initiating reconfiguration of the fastener from the first position by applying tension to the tensioning member;

positioning the fastener in fastening relationship with the second portion of material;

compressing the compression member with the tensioning member and substantially reconfiguring the fastener to the second configuration wherein said fastener is in a fastening relationship with both the first and second portions of material.

45. The method for fastening of claim 44, wherein in said first configuration the compression member is generally linear, and in said second configuration said compression member is generally curvilinear.

46. The method of claim 45, wherein the second configuration is one of a plurality of second configurations.

47. The method for fastening of claim 45, wherein the step of substantially reconfiguring the fastener to a second configuration comprises forming a plurality of loops.

48. The method for fastening of claim 47, wherein the plurality of loops define a helix.

49. The method for fastening of claim 44, further comprising the steps of: releasably securing the tensioning member after the step of substantially reconfiguring the fastener to the second configuration; and substantially maintaining the fastener in the second configuration.

50. A garment comprising a clothing size adjustment element, said size adjustment element comprising

an articulated outer compression member capable of being bent under tension from a first configuration to a second configuration; and

an inner tensioning member included therein, operably connected with the compression member for selectively applying a tension.

51. The garment of claim 50 wherein a single size adjustment element is required to provide a plurality of second configurations for portions of a brassiere.